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चदर के कपडे, बिस्तर के लिए मोटा धरोधर  
सूती कपडा एवं चदरें — विशिष्टि  
( चौथा पुनरीक्षण )

Sheeting, Tickings and Bedsheets —  
Specification  
( Fourth Revision )

ICS 59.080.30

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## FOREWORD

This Indian Standard (Fourth Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Man-made Fibres, Cotton and their Products Sectional Committee had been approved by the Textiles Division Council.

This standard covers sheeting, tickings and bedsheets manufactured from 100 percent cotton or 48 percent polyester and 52 percent cotton blend and it is hoped this will meet the requirements of organized consumers such as Ministry of Defence, Directorate General of Supplies and Disposal, hotel industry. The standard also provides use of cotton/viscose blend or polyester, viscose/cotton blend if agreed to between the buyer and the seller.

This standard was originally published in 1951 and subsequently revised in 1965 and 1979 and 1989. This standard is being revised again to incorporate the following changes:

- a) Requirement for fibre identification has been incorporated;
- b) Tolerance on count of yarn and number of threads per dm in warp and weft direction have been modified;
- c) BIS certification marking clause has been modified;
- d) Packing clause has been modified;
- e) Sampling clause has been modified;
- f) Amendment has been incorporated; and
- g) References have been updated.

The composition of the Committee responsible for the formulation of this standard is given in Annex C.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***SHEETING, TICKINGS AND BEDSHEETS — SPECIFICATION***( Fourth Revision )***1 SCOPE**

**1.1** This standard prescribes constructional details and other particulars of sheeting, tickings and bedsheets, scoured, bleached, dyed or printed.

**1.2** The standard does not specify general appearance, feel shade, etc (*see* also **5.1**).

**2 REFERENCES**

The standards listed in Annex A contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subjected to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards.

**3 FABRICS****3.1 Fibre Content**

The sheet shall be manufactured from 100 percent cotton or 48 percent polyester and 52 percent cotton blend. Fibre blend shall be intimately mixed.

**3.1.1** If agreed to between the buyer and the seller, cotton and viscose blend for variety 1 to 4 or polyester and viscose/cotton blend for variety no. 5 (*see* Table 1) may be used. However, the percentage of different fibres shall be declared by the manufacturer and a tolerance of  $\pm 3$  on the fibre constituent shall be permissible on declared percentage of the major fibre component when tested as per IS 11195. Such fabrics shall also meet the performance requirements specified in Table 2 and Table 3.

**3.2 Yarn**

The yarn shall be evenly spun (*see* IS 171 and IS 7866).

**3.3 Fabric Construction**

The fabric shall meet the construction particulars given in Table 1. The count of warp and weft are given for guidance only.

**3.4 Freedom from Defects**

The fabric when visually examined shall be free from spinning, weaving and processing defects (*see*

Annex B). The selvages shall be firm and straight. The bleached fabric shall have a full bleach finish and shall be free from blueing or optical whitening agents, if required by the buyer.

**3.5 Fabric Properties**

The fabric shall conform to the requirements given in Table 2 and Table 3. Colour fastness rating of dyed and printed fabric or dyed yarn used for stripes, in the fabric for tickings shall conform to those given in Table 3.

**4 BEDSHEETS****4.1 Fabric**

Bedsheets shall be made from fabric conforming to requirements laid in **3**.

**4.2 Sewing Thread**

Cotton sewing thread of 60 s/3 cotton count (100 dtex  $\times$  3) conforming IS 1720 shall be used. In case of dyed sheets, the thread shall be of a similar shade.

**4.3 Hems**

Each transverse end of sheet shall have a 2 cm hem. Minimum of 0.5 cm of the raw edge shall be turned in.

**4.4 Side Edges**

The sheets shall have selvedge on the two sides.

**4.5 Sewing**

The sewing shall be of even tension and the loose ends shall be finished securely and neatly. The number of stitches shall not be less than 4 per cm.

**4.6 Dimensions**

The finished dimensions of bedsheets shall be as specified in Table 4. Subject to a tolerance of  $\pm 1$  cm and  $+2/-0$  cm on width and length respectively.

**5 SEALED SAMPLE**

**5.1** If, in order to illustrate indeterminable characteristics such as general appearance, lustre, feel and shade, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

**Table 1 Construction Particulars**

(Clauses 3.1.1 and 3.3)

Variety No.	Fibre Content, <i>Min</i>	Count of Yarn Cotton Count (Tex)		Weave	Ends/cm	Picks/cm	Mass g/m <sup>2</sup> (see Note 2)	width cm <i>Min</i>	Remarks
		Warp (3)	Weft (4)						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	100 % cotton	12s (50 tex)	10s (60 tex)	2/1 warp faced twill	29	17	240	91 or as agreed	Used for tickings only (see Note 1)
2	100 % cotton	16s (36 tex)	16s (36 tex)	Plain	24	21	170	as agreed	-
3	100 % cotton	148 (42 tex)	18s (32 tex)	2/1 or 3/1 twill	27	21	185	91 or as agreed	Used for tickings only (see Note 1)
4	100 % cotton	20s (30 tex)	20s (30 tex)	Plain	26	23	145	as agreed	-
5	48 % polyester and 52 % cotton	20s (30 tex)	20s (30 tex)	Plain	28	25	155	as agreed	-
Tolerance, Percent	-	± 5	± 5	-	± 5	± 5	-	-	-
Method of Test	IS 667	IS 3442	IS 3442	Visual method	IS 1963	IS 1963	IS 1964	IS 1954	-

## NOTES

1 The fabric may be woven with coloured stripes as agreed to between the buyer and the seller.

2 The average mass shall meet the requirements as indicated in the table however, it is permissible for applying a tolerance of 2.5 percent on individual values when tested.

**Table 2 Performance Requirements for Fabrics**

(Clauses 3.1.1 and 3.5)

Variety No.	Breaking Load on 5 × 20 cm Strip (Ravelled Strip Method), <i>Min</i>		Dimensional Change (Shrinkage or Elongation), Percent, <i>Max</i>		Scouring Loss, Percent, <i>Max</i>	pH Value	Resistance to Pilling, <i>Min</i>
	Warpway (2)	Weftway (3)	Warpway (4)	Weftway (5)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	N (kgf)	N (kgf)					
1	660 (68)	550 (56)	2.5	2.5	2.0	6.0 to 8.5	-
2	470 (48)	390 (40)	2.5	2.5	2.0	6.0 to 8.5	-
3	470 (48)	270 (28)	2.5	2.5	2.0	6.0 to 8.5	-
4	440 (45)	390 (40)	2.5	2.5	2.0	6.0 to 8.5	-
5	650 (66)	600 (61)	1.5	1.5	2.0	6.0 to 8.0	4
Method of Test	← IS 1969 (Part 1) →		← IS 2977 →		IS 1383	IS 1390	IS 10971

NOTE — One newton (N) is approximately equal to 0.102 kgf.

**Table 3 Colour Fastness Requirement***(Clauses 3.1.1 and 3.5)*

SI No. (1)	Agency (2)	Minimum Rating (3)	Method of Test (4)
i)	Light	5 or better	IS/ISO 105-B01 or IS/ISO 105-B02
ii)	Washing: Test 3		IS/ISO 105- C10
	a) Change in colour	4 or better	
	b) Staining of adjacent fabrics	4 or better	
iii)	Bleaching: Hypochlorite	4 or better	IS/ISO 105-N01
iv)	Rubbing:		IS/ISO 105-X12
	a) Dry	4 or better	
	b) Wet	3 or better	
v)	Perspiration, acidic and alkaline		IS/ISO 105-E04
	a) Change in colour	4 or better	
	b) Staining of adjacent fabrics	4 or better	

**Table 4 Dimensions of Bedsheets***(Clause 4.6)*

SI No. (1)	Size (2)	Width, cm (3)	Length, cm (4)
i)	1	135	215
ii)	2	135	230/240
iii)	3	150	215
iv)	4	150	230/240
v)	5	175	255
vi)	6	230	230
vii)	7	230	275
viii)	8	275	275
ix)	Method of test	IS 1954	IS 1954

**5.1.1** The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

## 6 MARKING

**6.1** The sheeting, tickings and bedsheets shall be marked with the following:

- Name of material;
- Variety number;
- Fibre blend composition;
- Length(m) and width(cm);
- Indication of the source of manufacture; and
- Other information required as per law in force.

**6.1.1** The sheeting, tickings and bedsheets may also

be marked with the Standard Mark.

## 6.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

## 7 PACKING

Unless otherwise agreed upon by the buyer and seller, the sheeting, tickings and bedsheets shall preferably be packed in bales or cases in conformity with the procedure laid down in IS 1347 or in IS 293 as required.

**8 SAMPLING****8.1 Lot**

The quantity of the sheeting, tickings or bedsheets delivered to the buyer against one dispatch note shall constitute a lot.

**8.2** The conformity of the lot to the various requirements specified in the standard shall be

determined on the basis of tests carried out on the sample selected from the lot.

**8.3** Unless otherwise agreed, the number of pieces selected at random for inspection shall be in accordance with Table 5.

**8.3.1** For selection of samples at random from the lot, procedure given in IS 4905 may be followed.

**Table 5 Sample Size and Permissible Number of Non-conforming product(s)**

(Clauses 8.3 and 8.4)

SI No.	Lot Size Sample	Sample Size	Permissible Number of Non-conforming sheeting, tickings Bedsheets	Sub-sample Size
(1)	(2)	(3)	(4)	(5)
i)	Up to 90	5	0	3
ii)	91 to 150	8	0	3
iii)	151 to 500	13	1	5
iv)	501 to 1 200	20	1	5
v)	1 201 to 10 000	32	2	8
vi)	10 001 to 35 000	50	3	8
vii)	35 001 to 5 00 000	80	5	13
viii)	5 00 001 and above	125	7	13

**8.4 Number of Samples and Criteria for Conformity**

It shall be as follows:

SI No.	Characteristics	Number of Samples	Criteria for Conformity
(1)	(2)	(3)	(4)
i)	Ends, picks, length, width and freedom from defects, count	According to col (2) of Table 5	Number of non-conforming pieces shall not exceed the corresponding number given in col (3) of Table 5
ii)	Mass, dimensional change, pH value, colour fastness, blend composition, fibre content, scouring loss, pilling resistance, breaking load, hemming, sewing and fire resistant (optional)	According to col (4) of Table 5	All the test pieces shall meet the requirement

## ANNEX A

(Clause 2)

## LIST OF REFERRED STANDARDS

IS No.	Title	IS No.	Title
IS 171 : 1993	Textiles — Ring spun grey cotton yarn for weaving — Specification ( <i>fourth revision</i> )	IS 3442 : 2023	Method for determination of crimp and linear density of yarn removed from fabrics ( <i>second revision</i> )
IS 293 : 1980	Code of seaworthy packaging of cotton yarn and cloth ( <i>third revision</i> )	IS 3919 : 1966	Methods for sampling cotton fabrics for determination of physical characteristics
IS 667 : 1981	Methods for identification of textile fibres ( <i>first revision</i> )	IS 5463 : 2022	Methods for sampling of cotton fabrics for chemical tests ( <i>first revision</i> )
IS 1347 : 1972	Specification for inland packaging of cotton cloth and yarn ( <i>first revision</i> )	IS 7866 : 1993	Textiles — Ring spun polyester blended grey yarn — Specification ( <i>first revision</i> )
IS 1383 : 1977	Methods for determination of scouring loss in grey and finished cotton textile materials ( <i>first revision</i> )	IS 10971 (Part 1) : 2022	Textiles — Determination of fabric propensity to surface fuzzing and to pilling: Part 1 Pilling box method ( <i>second revision</i> )
IS 1390 : 2022	Textiles — Determination of pH of aqueous extract ( <i>third revision</i> )	IS 11195 : 1985	Specification for blend compositions of textiles
IS 1720 : 1978	Specification for cotton sewing threads ( <i>first revision</i> )	IS/ISO 105-B01 : 2014	Textiles — Tests for colour fastness: Part B01 Colour fastness to light: Daylight
IS 1954 : 1990	Determination of length and width of woven fabrics — Methods ( <i>second revision</i> )	IS/ISO 105-N01 : 1993	Textiles — Tests for colour fastness: Part N01 Colour fastness to bleaching: Hypochlorite
IS 1963 : 1981	Methods for determination of threads per unit length in woven fabrics ( <i>second revision</i> )	IS/ISO 105-C10 : 2006	Textiles — Tests for colour fastness: Part C10 Colour fastness to washing with soap or soap and soda
IS 1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics ( <i>second revision</i> )	IS/ISO 105-X12 : 2016	Textiles — Tests for colour fastness: Part X12 Colour fastness to rubbing ( <i>first revision</i> )
IS 1969 (Part 1) : 2018	Textiles — Tensile properties of fabrics: Part 1 Determination of maximum force and elongation at maximum force using the strip method ( <i>fourth revision</i> )	IS/ISO 105-E04 : 2008	Textiles — Tests for colour fastness: Part E04 Colour fastness to perspiration
IS 2977 : 1989	Fabrics (other than wool) — Method for determination of dimensional changes on soaking in water ( <i>first revision</i> )	IS/ISO 105-B02 : 2014	Textiles — Tests for colour fastness: Part B02 Colour fastness to artificial light: Xenon arc fading lamp test

**ANNEX B**

*(Clause 3.4)*

**LIST OF MAJOR FLAWS**

- a) One or more ends missing in the body of the material throughout its length, more than three ends missing at a place and running over 60 cm, or prominently noticeable double ends running throughout the piece;
- b) Undressed snarls noticeable over a length exceeding 5 percent of the length of the piece;
- c) Smash definitely rupturing the texture of the fabric;
- d) Hole, cut or tear;
- e) Read marks prominently noticeable over a length exceeding 5 percent of the piece;
- f) Defective or damaged selvedge noticeable over a length exceeding 5 percent of the length of the piece;
- g) Skewing of weft;
- h) Weft crack or two or more missing picks across the width of the fabric;
- j) Warp or weft bar due to difference in raw material, count, twist, lustre, colour, shade or spacing of adjacent groups of yarns (starting mark);
- k) More than two adjacent ends running parallel, broken or missing and extending beyond 10 cm;
- m) Noticeable warp or weft float in the body of the fabric;
- n) Noticeable oil or other stain in the fabric;
- p) Oily weft in the fabric;
- q) Prominently noticeable slub;
- r) Conspicuous broken pattern;
- s) Gout due to foreign matter, usually lint or waste, woven into the fabric;
- t) Prominent selvedge defect;
- u) Significant shading or listing having a gradual change in tone or depth of shade (excluding in selvedge);
- v) Coloured flecks;
- w) Blurred or dark patch;
- y) Patchy, streaky or uneven dyeing;
- z) Dye bar; and
- aa) Fuzzy appearance.









